

Bangladesh University of Engineering and Technology

**Course No:** EEE 212

**Project Report Submission**

**Project Title:** Image Processing Toolbox

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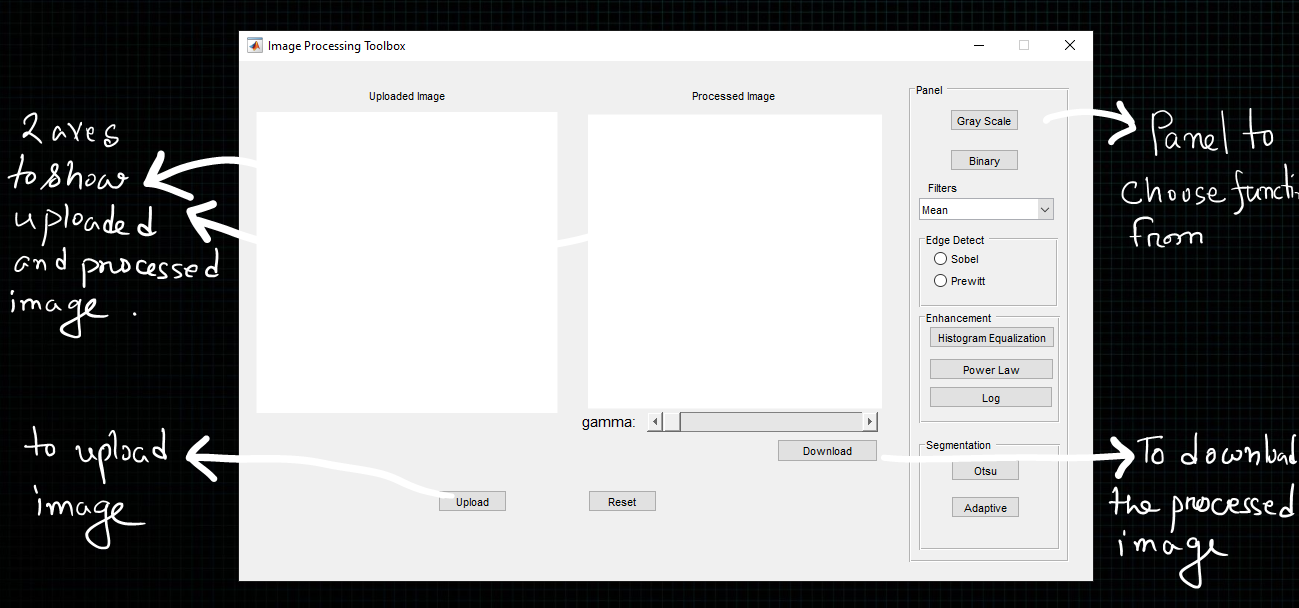
**Section: A1**

**Department**: EEE

The project is an aggregate of several image processing functionalities. It can perform:

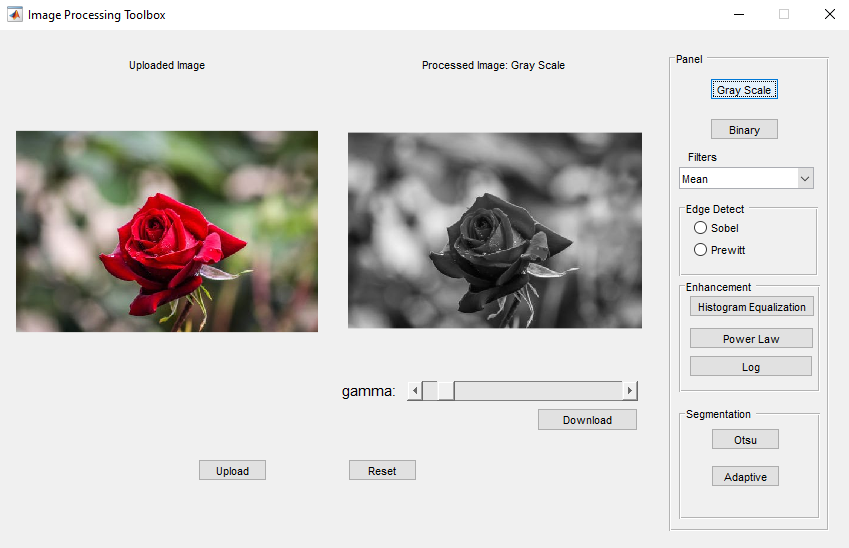
1. Grayscale conversion
2. Binary conversion
3. 4 types of filtering: Mean, Median, Max, Min
4. Edge detection using either Sobel or Prewitt operator
5. Histogram equalization
6. Log transformation
7. Power law transformation with variable gamma(from 0 to 4)
8. Segmentation using either adaptive or otsu

Overview of the program’s layout:

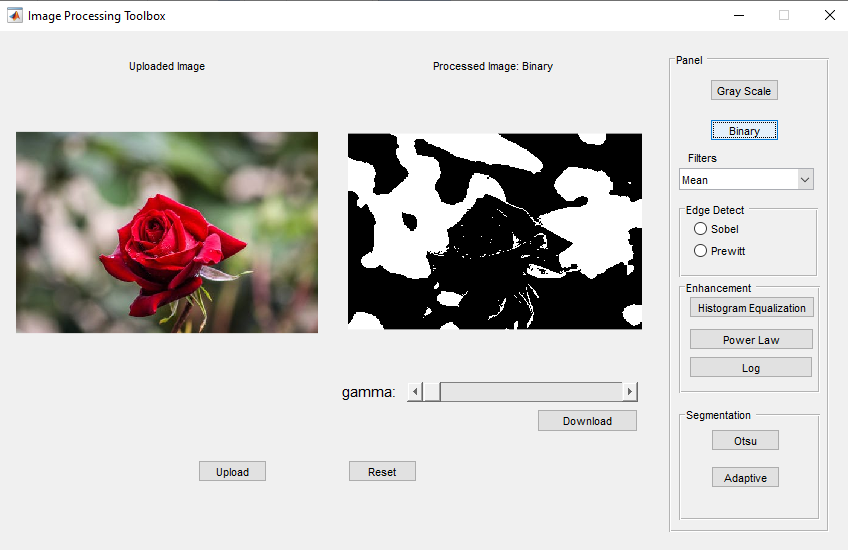


Demonstration of functionalities:

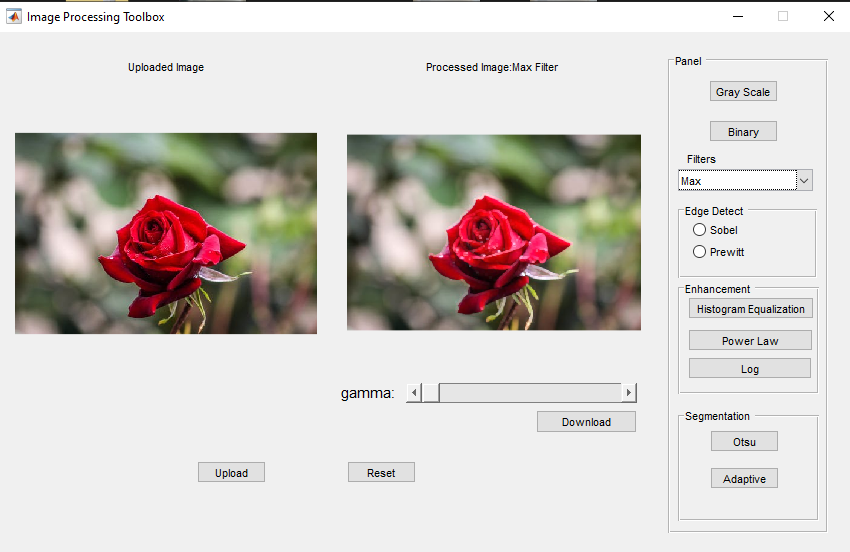
Gray Scale:



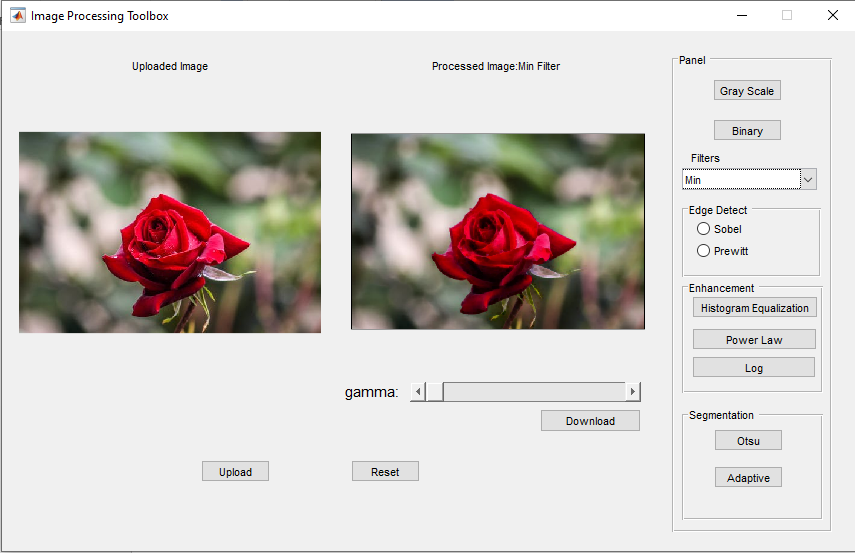
Binary:



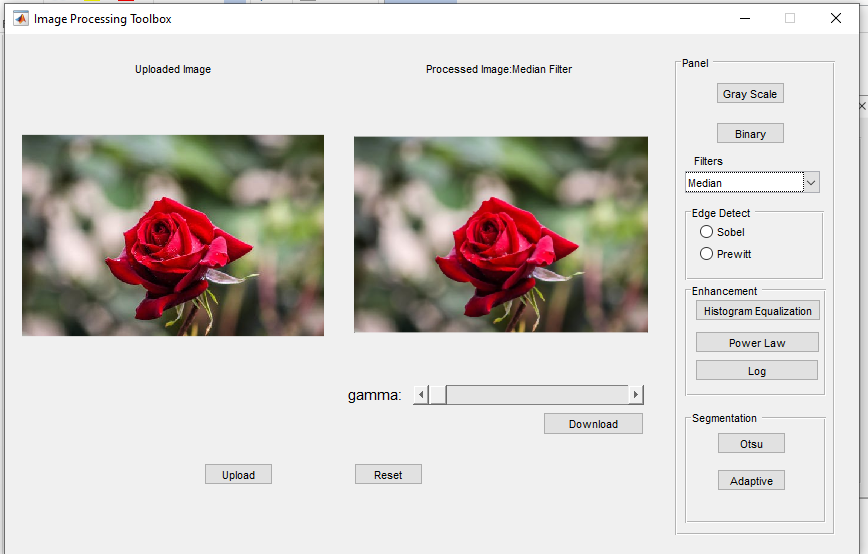
Max Filter:



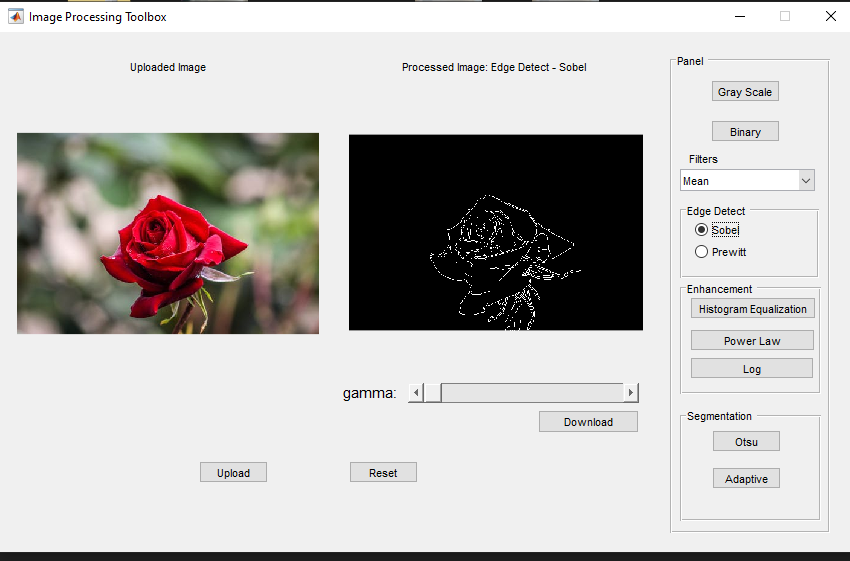
Min filter:



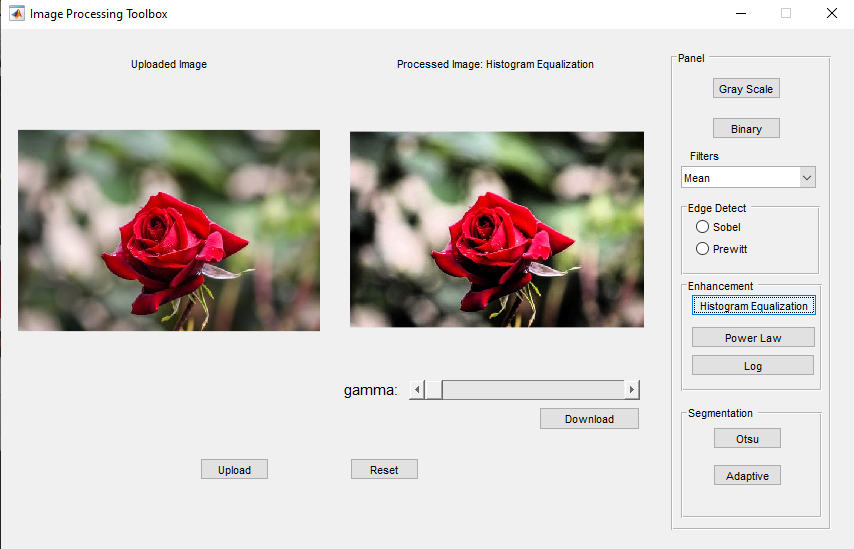
Median filter:



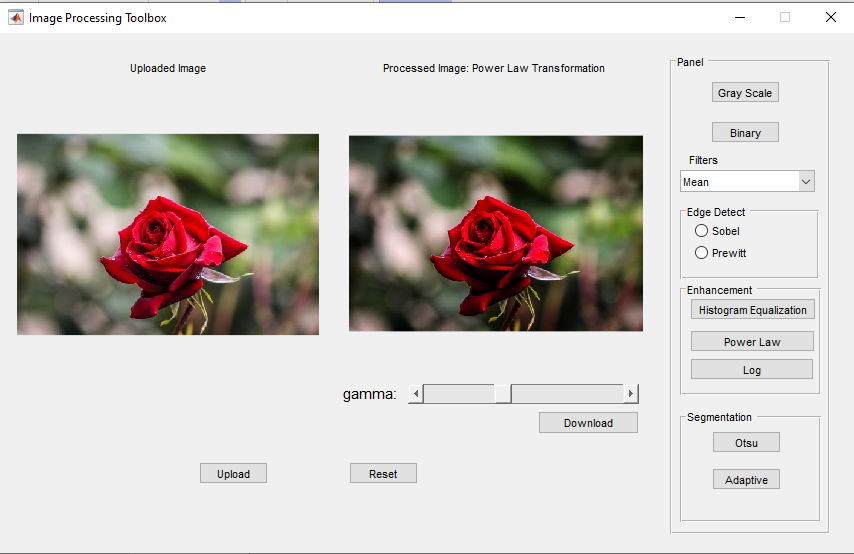
Sobel:



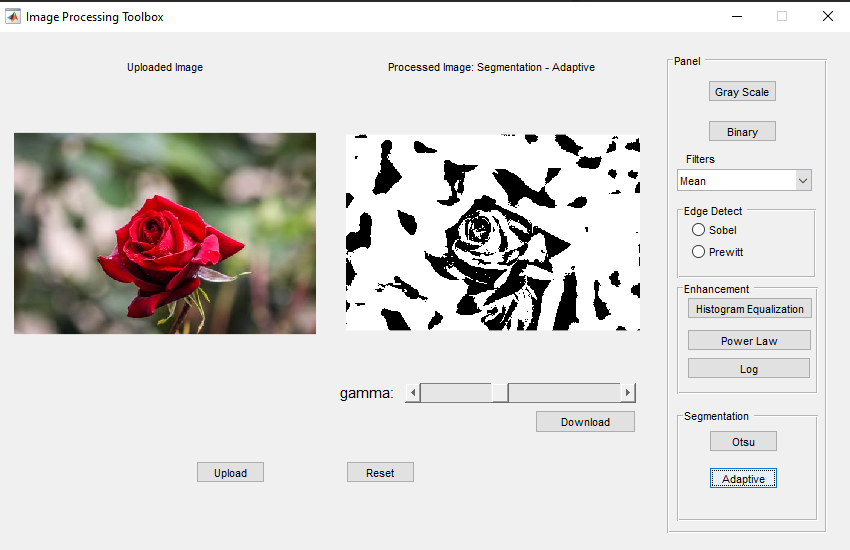
Histogram equalization:



Power law transformation:



Adaptive:



The project is almost finished. Little tweaking here and there are still going on with the project.